
**Overview of the
Proposed 1999 Amendment to the
1997 Ozone SIP Revision
for the South Coast Air Basin**

October 1999



South Coast
Air Quality Management District

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*Office of the Executive Officer
Barry R. Wallerstein, D.Env.*

October 1, 1999

**Subject: Overview of the Proposed 1999 Amendment
to the 1997 Ozone SIP Revision for the South Coast Air Basin**

Dear Fellow Clean Air Stakeholder:

Thank you for your interest and participation in the air quality planning process for the South Coast Air Basin, which is designed to meet state and federal Clean Air Act requirements. The AQMP is our local "blueprint" toward attainment of more healthful air for all residents of the Basin, and represents a dynamic balance of competing needs and resources.

The South Coast Air Quality Management District (AQMD) believes that all stakeholders deserve an opportunity to participate in any proposed modification of our region's Air Quality Management Plan (AQMP) commitments. The AQMD believes that public involvement is critical to successfully implementing an AQMP. Such involvement draws on the talents of the individual, business, the public sector, and nonprofit organizations in order to build the most feasible, cost-effective, and technically sound basis for clean air progress.

This Overview is intended to inform you about the upcoming "Proposed 1999 Amendment to the 1997 Ozone SIP Revision for the South Coast Air Basin" so that you will best be able to offer your input and suggestions during the public consultation process. This Overview summarizes the following elements: background on current air quality and public health impacts; local, state and federal regulatory roles; air quality planning actions to-date and related litigation; proposed refinement of control strategies; key issues for public discussion; and information about the public consultation process for the proposed Amendment.

When it is drafted and formally released for comment, the "Proposed 1999 Amendment to the 1997 Ozone SIP Revision for the South Coast Air Basin" will undergo an announced series of public workshops. We invite your participation throughout the AQMP Amendment process, as its success will depend on the input and involvement of our entire community.

I look forward to working together to develop the best possible refinement to our region's clean air plan.

Sincerely,

A handwritten signature in black ink that reads "Barry R. Wallerstein". The signature is written in a cursive, flowing style.

Barry R. Wallerstein, D.Env.
Executive Officer

Clean Air Is Every Body's Business™

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PREFACE

In September 1994, the South Coast Air Quality Management District (AQMD, or District) Governing Board approved the 1994 Air Quality Management Plan (AQMP). The 1994 AQMP was submitted to the California Air Resources Board (CARB) and was approved by CARB as part of the California State Implementation Plan (SIP) for ozone. The 1994 California Ozone SIP was subsequently submitted to the U.S. Environmental Protection Agency (U.S. EPA) for approval on November 15, 1994. California was the only state that met the federal Clean Air Act submittal deadline for ozone. The U.S. EPA approved the 1994 California Ozone SIP in September 1996 -- the first such SIP submittal to receive federal approval for the South Coast Air Basin. The approval noted that the plan could be updated and modified consistent with the federal Clean Air Act.

The next regularly scheduled update to the Air Quality Management Plan, the 1997 AQMP, refined the basic control strategy of the South Coast portion of the 1994 Ozone SIP by incorporating advances in scientific knowledge and changes in policy. The revision included a more feasible set of control measures and a finding that fewer emission reductions would be needed to meet the federal 1-hour ozone standard within the same timeframe. The 1997 AQMP was approved by the CARB and submitted to the U.S. EPA in February 1997.

Throughout 1997 and 1998, U.S. EPA and AQMD exchanged correspondence regarding the potential approvability of the 1997 AQMP. No formal action either to approve or disapprove the plan update was made by U.S. EPA during that time. No specific list of necessary amendments was provided by U.S. EPA that would ensure approvability.

In 1997, several environmental/community groups filed suit to compel enforcement of the emission control measures contained in the 1994 California Ozone SIP. AQMD's position in the litigation has been that the 1994 plan was superseded by the 1997 AQMP and that staff efforts should be directed at implementation of the most recent plan update. In November 1998, the AQMD filed suit against the U.S. EPA for not taking action to approve or disapprove the 1997 AQMP.

In January 1999, the U.S. EPA gave notice of its proposed disapproval of the control strategies contained in the 1997 AQMP. AQMD has also sued U.S. EPA for failing to complete its commitment, made in the 1994 plan approval, to control federal sources of emissions. Lengthy and comprehensive discussions among U.S. EPA staff, AQMD staff, court officials, and other involved parties have not resulted in satisfactory settlement of the issues being contended. On August 27,

1999, the U.S. District Court issued its intended decision on the litigation ordering the AQMD to implement 31 control measures from the 1994 Ozone SIP.

The AQMD continues to believe that the basic control strategy of the 1997 AQMP adopted in late 1996 is sound. However, the simple passage of time -- now fully three years -- following the strategy's original development has now changed the pollution control landscape to a degree. **Based on the latest technology evaluations, prepared in anticipation of the year 2000 AQMP revision, AQMD now believes it is possible to accelerate a portion of the emission reductions currently contained in the long-term control measures of the 1997 AQMP.** This is possible because the intervening years have brought new technology and new knowledge to bear on potential means of emissions control.

Therefore, the AQMD is proposing a 1999 Amendment to the 1997 Ozone SIP Revision, which would modify the schedule for the adoption and implementation of specific control measures including some of those measures that the court has ordered the AQMD to adopt and implement, while leaving the plan's emissions inventories and attainment demonstration unchanged. The Amendment provides for greater VOC emission reductions in the near-term. This action represents early adoption of the measures that would otherwise be contained in the next comprehensive update of the AQMP (i.e., 2000 AQMP Revision). If the 1999 Amendment is adopted, the District will submit it to U.S. EPA for approval as part of the 1997 Ozone SIP Revision. If U.S. EPA approves the 1997 Ozone SIP Revision with the 1999 Amendment, it would provide a basis for requesting removal of the Court's order requiring implementation of the 1994 Ozone SIP. However, until such time, the AQMD will fully comply with the Court order.

This Overview presents a general outline of the proposed Amendment to provide additional background information on the actual draft Amendment. This document summarizes the following elements: background on current air quality, emission reduction progress and public health impacts; local, state and federal regulatory roles; air quality planning actions to-date and related litigation; proposed refinement of control strategies; key issues for public discussion; and information about the public consultation process for the proposed Amendment.

EXECUTIVE SUMMARY

The 1997 AQMP, submitted to the U.S. EPA in February 1997 for approval, has not been formally approved or disapproved as of September 1999. However, notice of proposed partial disapproval has been issued (64 FR 1770).

Why is AQMD proposing to prepare a 1999 Amendment to the ozone portion of the 1997 AQMP?

The AQMD continues to believe the basic control strategy of the 1997 AQMP is sound. However, nearly three years have passed since the plan was developed and the AQMD now believes it is possible to accelerate a portion of the emission reductions currently contained in the long-term control measures, and allocate these reductions to the short-term measures. This is possible because the intervening years since 1996 have brought new technology and new knowledge to bear on potential means of emission control. (*See the Preface and Analytical Approach sections for more detail.*) It is hoped that such an amendment will lead to an EPA-approved revision that will make the 1994 Ozone SIP and the basis for the Court order requiring its implementation moot.

What will be changed in the 1999 Amendment?

The AQMD intends to prepare a 1999 Amendment to the ozone portion of the 1997 AQMP (known as the 1997 Ozone SIP Revision) which will be limited to a revision of the 1997 AQMP control strategy to:

- 1) include new short-term control measures that implement and replace portions of the 1997 AQMP long-term measures;
- 2) expedite the implementation of a portion of the short-term measures in the 1997 AQMP; and
- 3) revise the adoption and implementation schedule for those 1997 AQMP control measures with lapsed adoption dates.

Some of these changes, discovered as part of preparation for the next plan update, stem from advancements in knowledge and technology since the 1997 AQMP was prepared and will result in greater emission reductions in the near-term compared to the 1997 AQMP. (*See the Proposed Revised Control Strategy section for more detail.*)

What is not being changed in the 1999 Ozone SIP Revision?

The proposed Amendment will leave the 1997 Ozone SIP Revision's emissions inventories and attainment demonstration unchanged. (*See the Analytical Approach section for more detail.*) In addition, the proposed Amendment will not include those court-ordered 1994 Ozone SIP control measures that the AQMD considers infeasible or not cost-effective to implement since the 1997 Ozone SIP Revision provided supporting evidence for the removal of these measures.

What is at stake as the approvability of the 1997 Ozone SIP Revision is being resolved?

The following issues may be affected by the final action on the 1997 Ozone SIP Revision:

- Incorporation of best science and an ability to make midcourse refinements in each plan update;
- Relief from technology-forcing measures which have been found infeasible;
- Efficient use of resources for clean air efforts and an ability to re-prioritize measures with extremely low emission-reduction returns;
- Adequate control of federal sources;
- Consideration of public input relative to AQMP refinements; and
- Expeditionary progress toward clean air.

(See the Key Issues section for more detail.)

Is air quality improving?

Yes, ozone levels continue to show improvement. The Basin's very hot summer of 1998 did show somewhat higher ozone concentrations than 1997, with maximum ozone concentrations occurring in the central San Bernardino Mountains. However, the summer of 1998 was one of the hottest summers recorded, with high ozone concentrations measured throughout California in July 1998. Weather patterns during the summer of 1999 were much milder and the Basin did not experience any ozone concentrations above the Stage I episode level for the first time in recorded history. While year-to-year ozone levels may fluctuate, longer-term trends in air quality show a continued decrease in ozone levels since the mid-to-late 1950's when ozone levels were three to four times higher than today's levels.

(See the Background section for additional detail.)

BACKGROUND

Attainment Picture

Air quality in Southern California continues to improve, with recent years registering the lowest levels ever measured. Yet the greater Los Angeles area still experiences the worst air quality in the nation. The South Coast Air Basin exceeded the federal health standard for ozone on 62 days in 1998, with maximum levels twice as high as the federal ambient air quality standard.

There are currently approximately 15 million residents in this region -- about half the population of the whole state of California -- and the number is continually growing. It is the second most populated urban area in the United States -- and the smoggiest (see Figure 1). State and federal law requires this area to meet existing clean air standards by the year 2010. However, new federal standards for ozone and particulates may require reductions above and beyond those already planned -- up to an additional 68% even though we already have the strictest pollution control requirements in the nation. (Note: The enforcement of the new ozone air quality standards has been set aside by a court ruling. However, U.S. EPA is seeking review of that ruling.)

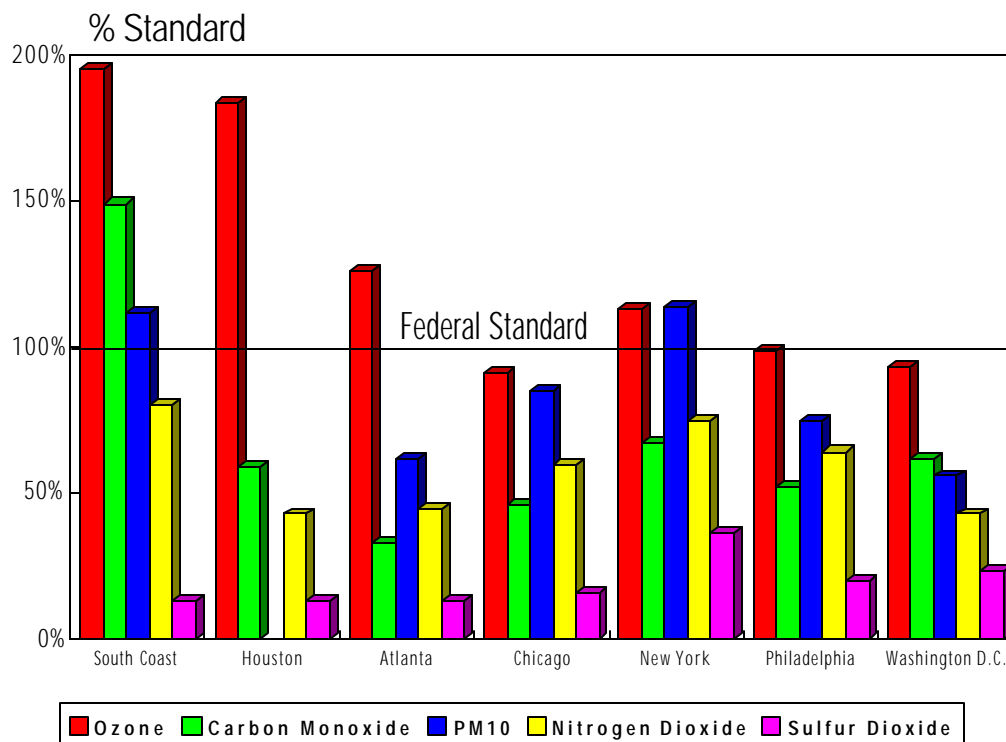


Figure 1
South Coast Air Basin Air Quality in 1998 Compared to Other U.S. Cities

Continuing the progress toward clean air is a challenging task, not only to recognize and understand complex interactions between emissions and resulting air quality, but also to pursue the most feasible set of strategies to improve air quality while maintaining a healthy economy.

South Coast District

The South Coast Air Quality Management District (AQMD, or District) was created by the 1977 Lewis-Presley Air Quality Management Act, which merged four county air pollution control bodies into one regional district. Under the Act, the AQMD is responsible for controlling non-vehicular sources of pollution, and for adopting and implementing plans to bring air quality in the areas under its jurisdiction into attainment with federal and state air quality standards.

The 10,743 square-mile-area managed by the District includes all of Orange county and the non-desert portions of Los Angeles, Riverside and San Bernardino counties (see Figure 2). The AQMD implements strategies to achieve healthful air quality in the South Coast Air Basin and those portions of the Salton Sea Air Basin and Mojave Desert Air Basin that are under AQMD jurisdiction. These basins are so named because their geological formations are that of a basin, with surrounding mountains serving to contain the air and its pollutants in the valleys or "basins" below.

The AQMD is responsible for controlling emissions primarily from stationary (non-vehicular) sources of air pollution. These range from large power plants and refineries to corner gas stations and use of paints and solvents. There are about 28,000 such businesses operating under AQMD permits. About 30% of this area's air pollution come from stationary sources, both businesses and residences. The other 70% come from mobile sources -- mainly cars, trucks and buses, but also construction equipment, ships, trains and airplanes. The California Air Resources Board (CARB) and the U.S. EPA establish emission standards for mobile sources.

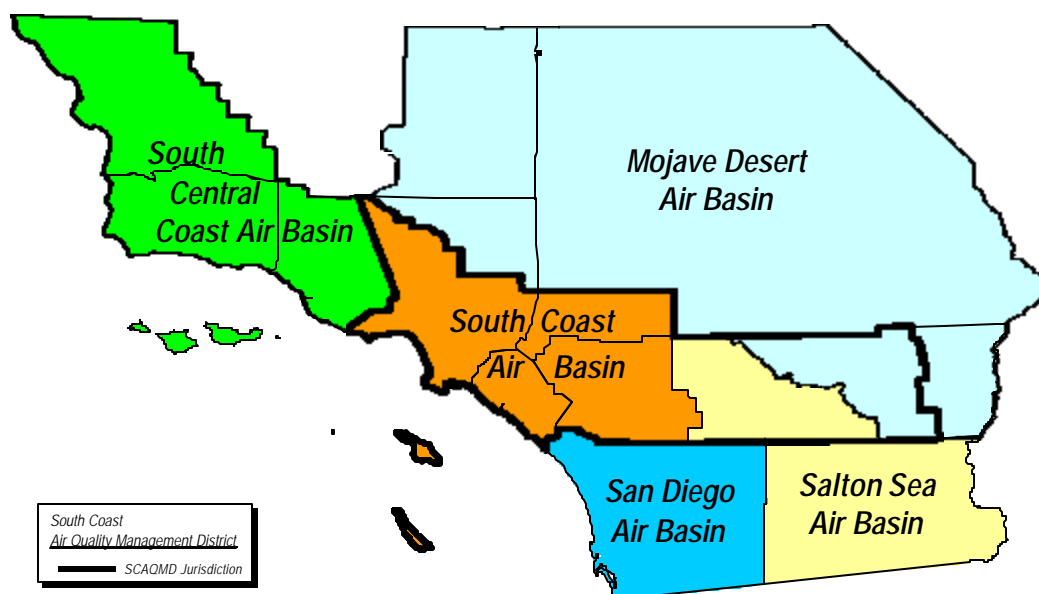


Figure 2
South Coast Air Quality Management District Boundaries

Current Air Quality and Health Effects

Ozone, the primary component of photochemical smog, is formed when volatile organic compounds and oxides of nitrogen react in the presence of ultraviolet sunlight. Ozone concentrations are historically higher in the South Coast Air Basin than anywhere else in the nation. The Basin also experiences the highest number of days of exceedance of the national ozone air quality standards of anywhere in the nation. Individuals exercising outdoors, children, and people with pre-existing lung disease, such as asthma and chronic pulmonary dysfunction, are considered to be most susceptible to ozone effects. Short-term exposures to ozone levels observed in the Basin can result in reduction of breathing capacity, increased susceptibility to infection, inflammation of the lung tissue, and some immunological changes. Polluted air also damages agriculture and human-made materials.

Ambient air quality standards have been set by both California and the federal government for ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, particulates and lead. The standards were determined by how much of these compounds could be in the air without causing adverse health effects. The Basin is designated as an "extreme" nonattainment area for ozone. Figure 3 shows the number of days the federal 1-hour and new 8-hour ozone standards were exceeded in the Basin by geographic location in 1998. Figure 4 shows the long-term trend in ambient ozone counts over the last two decades.

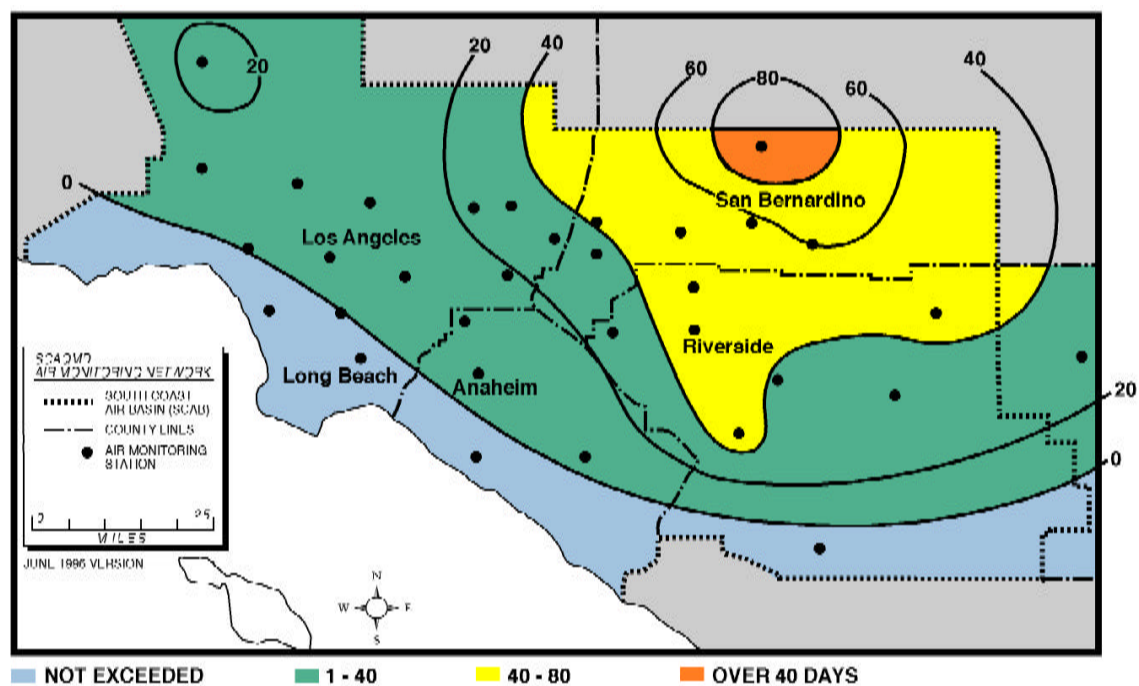
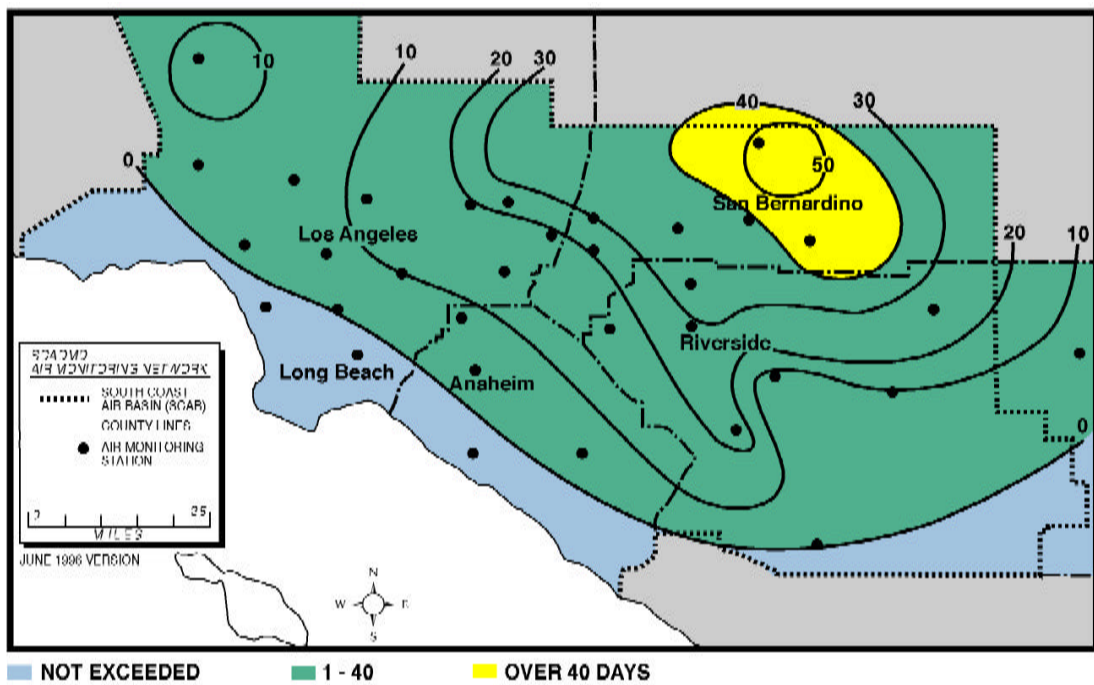


Figure 3
Number of Days Exceeding the Federal
1-Hour and 8-Hour Ozone Standards in 1998

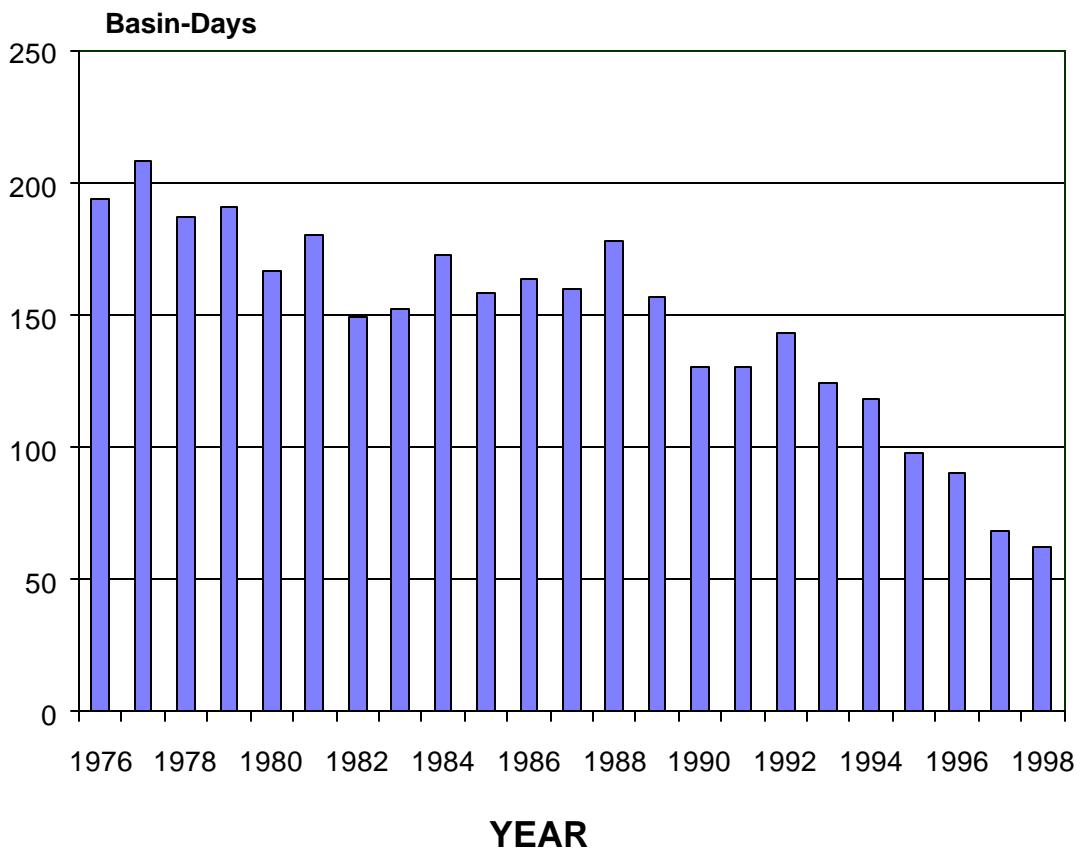


Figure 4
Total Basin Days Above the Federal 1-Hour Standard from 1976-1998

Federal and State Air Quality Requirements

The 1988 California Clean Air Act includes the following key requirements that must be addressed in any AQMP revision: apply Best Available Retrofit Control Technology; reduce nonattainment pollutants and their precursors at a rate of five percent per year, or, if this cannot be done, include all feasible measures and an expeditious implementation schedule; reduce population exposure to severe non-attainment pollutants (i.e. ozone, carbon monoxide, and nitrogen dioxide for the Basin) according to a prescribed schedule; and, rank control measures by cost-effectiveness and implementation priority. Finally, state law requires the plan to provide for attainment of the federal and state ambient air quality standards at the earliest practicable date.

The 1990 federal Clean Air Act Amendments overhauled the federal planning provisions for areas not meeting federal clean air standards. The amendments identified specific emission reduction goals, required both a demonstration of reasonable further progress and attainment by specified dates, and incorporated more stringent sanctions for failure to attain or to meet interim milestones. The 1994

and 1997 AQMPs were designed to meet applicable state and federal requirements.

New Federal Ozone Air Quality Standard

In July 1997, the U.S. EPA issued a new ozone air quality standard based on an 8-hour average exposure (the current federal ozone air quality standard is based on a 1-hour average period). The new 8-hour provides for greater health protection. Under Presidential Orders issued after the ozone air quality standard was established, new emission controls to meet the 8-hour ozone standard would not be required until the region attains the current 1-hour ozone standard. Thus, current regulatory control strategies will continue to focus on attaining the 1-hour standard with the recognition that these controls will have benefits toward attaining the 8-hour standard. For the South Coast Air Basin, the attainment year for the new 8-hour ozone air quality standard is the same as the 1-hour ozone air quality standard (i.e., 2010-2012). However, under a recent federal court decision, U.S. EPA may not implement the new 8-hour ozone standard. U.S. EPA has indicated that it will seek review of the court decision.

PLAN HISTORY

AQMP Chronology

Both federal and state Clean Air Acts require that each nonattainment area prepare a plan to reduce air pollution to healthful levels. The AQMD develops and adopts an Air Quality Management Plan (AQMP) which serves as the blueprint to bring the District into compliance with federal and state clean air standards. Subsequent to being broadly included in the AQMP, control measures are developed and approved as individual rules to reduce emissions from specific types of equipment, industrial processes, paints and solvents, and some consumer products. Because knowledge about air pollution is constantly improving, the planning process is dynamic, with routine revisions to reflect the most current state-of-knowledge.

The California Clean Air Act and the federal Clean Air Act established planning requirements and deadlines for attainment of the air quality standards. In addition, under state law, the AQMP must also be comprehensively reviewed and revised every three years, in order to incorporate best available scientific data --primarily in the form of updated emissions inventories, ambient measurements, and new computer models-- and update pollution control approaches.

A revised AQMP that reflected the requirements from the federal and state government was adopted by the AQMD in July 1991. The 1994 revision to the plan was adopted by the AQMD Governing Board in September 1994 and incorporated by CARB in the California State Implementation Plan (SIP), which was adopted in November 1994. The South Coast Air Basin portion of the California SIP was fully approved by the U.S. EPA in September 1996.

In November 1996, the AQMD Governing Board adopted the 1997 AQMP that modified the 1994 ozone attainment strategy for the Basin and also presented an attainment strategy for the national PM10 standard. The 1997 AQMP was submitted by CARB to the U.S. EPA in February 1997 for approval. Relative to the ozone portion of the 1997 AQMP (known as the 1997 Ozone SIP Revision), the AQMD and CARB requested that the 1997 AQMP replace the 1994 California Ozone SIP for the South Coast Air Basin.

The 1997 Ozone SIP Revision maintained the primary strategic focus of the 1994 Plan and showed that fewer tons of emission reductions would be needed to reach the federal 1-hour ozone air quality standard. As a result, the 1997 Plan demonstrated attainment in the same timeframe as the 1994 Ozone SIP while delaying the interim adoption dates for some control measures and deleting others which were deemed infeasible for technical, economic or social reasons (such as lack of public acceptance).

U.S. EPA announced in January 1999, without specifically identifying the amendments necessary to ensure approvability, that it intends to disapprove portions of the 1997 revision to the SIP in its current form. However, it proposed to approve the baseline emission inventories, but to disapprove the control strategy.

Related Litigation

In September 1997, a citizen suit was filed by three environmental groups, seeking a court order requiring the AQMD to adopt and implement 31 measures from the 1994 AQMP that had been delayed or dropped in the 1997 revision. These changes were made in the 1997 AQMP because the District determined that the measures as previously written were infeasible. The suit also named CARB and U.S. EPA as defendants relative to the mobile source control measures provided in the 1994 California Ozone SIP. Since the 1994 Ozone SIP is the latest version approved by the U.S. EPA as part of the SIP, the U.S. District Court ruled in October 1998 that the Clean Air Act legally obligates the District to adopt those measures until an approved amendment to the SIP removes the measures.

The U.S. District Court issued its intended decision regarding the litigation on August 27, 1999 with a specific order for rule implementation. The Court found that the AQMD must implement 31 control measures from the 1994 Ozone SIP and provided a proposed timetable for adoption and implementation of the 31 measures. The District Court found that it does not have authority to change or revise a SIP (only U.S. EPA has that authority under federal law). The Court also found that it does not have the “jurisdiction to consider issues of feasibility, general practicality, political objections or cost factors in ordering the implementation of a SIP.” Again, only U.S. EPA can make these determinations.

In November 1998, AQMD filed suit to compel U.S. EPA to formally render a final revision on the 1997 AQMP as well as on 51 overdue rule approvals from previous SIP submittals. U.S. EPA’s proposed partial disapproval responded to this lawsuit but without listing specific actions to ensure future approvability. Subsequently, AQMD also filed a motion for leave and a cross-complaint to compel U.S. EPA to implement the measures in the 1994 SIP that U.S. EPA committed to in approving the 1994 SIP. That motion was granted and the cross-complaint was filed January 25, 1999. Neither of these cases has been set for hearing yet.

ANALYTICAL APPROACH

As indicated earlier, as the AQMD develops this proposed Amendment, it will be relying upon the basic attainment demonstration detailed in the 1997 AQMP. This includes the emissions inventories, modeling analyses, carrying capacity and overall control strategy as contained in the 1997 AQMP, which remain suitable.

The proposed Amendment will, however, contain an accelerated implementation schedule to achieve emissions reductions earlier than specified in the 1997 Ozone SIP Revision. In addition, the proposed Amendment will revise the adoption and implementation schedule for the remaining measures contained in the 1997 Ozone SIP Revision.

The AQMD hopes that the proposed Amendment will address those portions of the 1997 Ozone SIP Revision that the U.S. EPA is proposing to disapprove. In addition, the control strategy proposed in the Amendment would provide additional emission reductions in the near-term equivalent to or greater than the amount associated with the court-ordered control measures.

Preparation and approval of a 1999 Amendment to the 1997 Ozone SIP Revision would constitute early action on a portion of the year 2000/2001 AQMP revision. The remaining portions would be scheduled for adoption in late 2000 or early 2001. When developed, the proposed 1999 Amendment will not address the new 8-hour federal ozone standard. Pursuant to previous federal guidance, the new standard is to be addressed in the plans adopted in the 2003/2004 timeframe.

PROPOSED REVISED CONTROL STRATEGY

The control strategy refinement in the proposed 1999 AQMP Amendment is designed to achieve three objectives:

- 1) to update the adoption and implementation schedule of the remaining 1997 AQMP short-term control measures (see Table 1);
- 2) to expedite the implementation of long-term control measures in the 1997 AQMP (see Table 2); and
- 3) help ensure U.S. EPA approvability.

1997 Ozone SIP Revision Control Measures with Accelerated Implementation Schedules and New Control Measures

There are about 89 tons per day of VOC emission reductions outlined in the 1997 AQMP from long-term control measures [i.e., commonly termed Section 182(e)(5) measures, as referenced in the federal Clean Air Act]. These measures, in general, have a proposed rule adoption schedule between 2003 and 2005 with implementation dates between 2006 and 2010. The following text describes the control measure concepts that near-term regulatory actions are preliminarily deemed feasible to accelerate.

Group I:

1997 AQMP Control Measures

with Expedited Adoption/Implementation Dates

CM#99CTS-02C(P2) - Further Emission Reductions from Solvent Cleaning

Operations: This measure would implement a portion of CM#97ADV*-CLNG provided in the 1997 AQMP by reducing the VOC limit to below 50 g/l for many of the cleaning operations. Previously, due to the constraint of laboratory test detection limits, the standard has been set at 50 g/l. Recent refinements in test methods have identified compliant products at a lower level. The measure will also seek emission reduction opportunities from categories currently exempt under AQMD Rule 1171.

CM#99CTS-07(P3) - Further Emission Reductions from Architectural Coat-

ings and Cleanup Solvents: This measure along with two recent rule amendments in 1996 and 1999 to Rule 1113 - Architectural Coatings, will fully implement CM #99ADV-ARCH. On-going technical evaluation on coating performance and research to further develop low-VOC and/or low-reactive coating materi-

* The three-letter designation represents the source category: ADV=Advanced Technology Measures; CMB=Combustion Sources; CTS=Coatings & Solvents; MSC=Misc. Sources; PRC=Process-Related Emissions. Some measures may have a suffix designation of "(Px)" to represent additional phases of adoption and implementation and "x" represents the phase.

als can provide further reduction opportunities. This measure will also seek emission reductions in cleanup solvent use that is currently exempt under Rule 1171 - Solvent Cleaning Operations.

CM#99PRC-06 - Further Emission Reductions from Industrial Processes:

This measure is designed to implement a portion of CM#97ADV-PRC provided in the 1997 AQMP. The source categories include, but are not limited to, polyester resin operations, manufacturing or fabrication of rubber or plastic products, or food flavoring operations. The potential control options to be evaluated include material and/or process modification, and good housekeeping measures.

CM#99CTS-08 - Further Emission Reductions from Industrial Coating and Solvent Operations: This measure will implement a portion of CM#97ADV-CTS provided in the 1997 AQMP through a comprehensive review of existing Regulation XI and Regulation IV to identify further reduction potential. The review would include, but not be limited to, a comparison of VOC limits adopted by other air districts in California, survey of recent BACT determinations, etc.

Group II:

New Control Measure Concepts to Implement the 1997 AQMP Long-Term Measures

CM#99CTS-09 - Further Emission Reductions from Large Solvent and Coating Sources: This measure is designed to seek additional VOC emission reduction opportunity from large coating and solvent operations (e.g., facilities emitting more than 25 tons per year). Control options to be considered include add-on controls, use of super-clean coating materials, or process changes. Compliance flexibility at the facility level would also be examined. This measure will implement a portion of CM#97ADV-CTS provided in the 1997 AQMP.

CM#99FUG-05 - Further Emission Reductions from Large Fugitive VOC Sources: This measure intends to further reduce emissions from large fugitive emission sources, such as refineries, oil and gas production facilities, terminals, chemical plants, and manufacturing facilities. Reductions could be achieved through the implementation of facility-specific and AQMD approved compliance plan. As such, compliance flexibility opportunities could be maximized. This measure will implement a portion of CM#97ADV-FUG provided in the 1997 AQMP.

CM#99FUG-06 - Emission Reductions from Hydrogen Plant Process Vents:

During recent emission audits, AQMD staff found that the methane reformer catalyst at some refinery hydrogen plants may generate a potentially significant

amount of VOC emissions, primarily methanol. Although the recently developed Refinery National Emission Standards for Hazardous Air Pollutants (NESHAP) Maximum Achievable Control Technology (MACT) exempts hydrogen plant process vents, there may be cost-effective controls to reduce such emissions for criteria pollutant purposes. The implementation of this control measure would first involve the development of an accurate inventory. Since the 1997 AQMP baseline emissions inventory may not have included these emissions, any emission reductions achieved from this measure would not be credited towards the attainment demonstration.

CM#99RFL-02(P2) - Further Emission Reductions from Gasoline Dispensing Facilities: During recent compliance audits for Rule 461, it was found that many gas stations were not complying with Rule 461. As such, AQMD staff is developing amendments to Rule 461 to tighten rule requirements and improve compliance. As part of the rule amendment staff has also identified further emission reductions potential from gas stations. This measure will implement a portion of CM#97ADV-FUG provided in the 1997 AQMP.

The range in emission reduction potential from all identified measures is presented in Table 2. For the purpose of SIP commitments, the lower end of the range is proposed, resulting in a total of 40.8 tons per day of reductions expedited from the original 1997 AQMP schedule. The upper range of an additional 30 tons per day of reductions shown in Tables 1 and 2 are subject to technical feasibility evaluation during the rule development process and may require longer implementation dates to further refine the control technologies. The AQMD will seek to maximize the reductions wherever feasible. The uncertainty associated with the 30 tons per day of reductions include potential double-counting of emission reductions between control measures, applicability of control technology across source categories, and cost-effectiveness. With full implementation of the already adopted rules and proposed short-term measures, the remaining VOC emission reductions associated with the long-term measures are estimated to be about 28 tons/day.

Table 1

**Remaining 1997 Ozone SIP Revision VOC and NO_x Control Measures
Incorporated in the Proposed 1999 Amendment**

Control Measure	Title	Adoption Date	Implementation Period	Reductions in 2010 (T/D)
CMB-06	Emission Standards for New Commercial and Residential Water Heaters (Rule 1121) (NO _x)	1999	2003	7.6
WST-01 ^(a)	Emission Reductions from Livestock Waste (R1419) (VOC, Ammonia)	2002	2004	3.3
WST-02	Emission Reductions from Composting (VOC, PM ₁₀ , Ammonia)	2001	2004-2006	TBD
WST-03	Emission Reductions from Waste Burning (R444)	*		0.0
WST-04	Emission Reductions from Disposal of Materials Containing Volatile Organic Compounds (VOC)	2000	2002	0.8
PRC-03(P2)	Emission Reductions from Restaurant Operations – Phase II (R1138) (VOC, PM ₁₀)	2000**	2001 (new) 2003 (retrofit)	0.9
FUG-03 ^(b)	Further Emission Reductions from Floating Roof Tanks (R463) (VOC)	TBD	TBD	0.0
FUG-04 ^(c)	Fugitive Emission Reductions from Fugitive Sources (R1173) (VOC)	(c)	(c)	(c)
CTS-02E ^(d)	Further Emission Reductions from Adhesives (R1168) (VOC)	2000	2007-2008	1.3
CTS-02O	Further Emission Reductions from Solvent Usage (Rule 442) (VOC)	2000	2002	1.0 - 2.0
MSC-01	Promotion of Lighter Color Roofing and Road Materials and Tree Planting Programs (All Pollutants)	Delay until next AQMP revision	--	0.0
MSC-03	Promotion of Catalyst-Surface Coating Technology Programs (All Pollutants)	Delay until next AQMP revision	--	0.0
FLX-01	Intercredit Trading Program (All Pollutants)	Delay until next AQMP revision	--	0.0
TOTAL				VOC=7.3 - 8.3 NO_x=7.6

^(a) Significant research funds will be necessary to identify control strategies for rule adoption and assess their effectiveness in the event dairy relocations fall short of achieving the AQMP emission reduction targets (30% VOC reduction and 50% ammonia reduction).

* Implemented through MOUs with local fire agencies.

** Based on most recent technology assessment prepared by UC Riverside College of Engineering – Center for Environmental Research and Technology (CE-CERT).

^(b) Staff technology assessment in October 1997 recommended that this measure be considered in the next AQMP revision due to minor emission inventory.

^(c) Due to potential double-counting, emission reductions from this measure are included as part of FUG-05 in Table 2. As such, rule development for Control Measures FUG-04 and FUG-05 will be combined.

^(d) Implementation dates will be further evaluated during the next AQMP update.

Table 2

Proposed New and Revised VOC Control Measures for the 1999 Amendment to the 1997 Ozone SIP Revision

Title/ Description		Reduction Potential ¹ (TPD)	Adoption Date	Implementation Dates ²
Group I. Control Measures with Expedited Adoption/Implementation				
1.	CTS-02C(P2): Further Emission Reductions from Solvent Cleaning Operations (Rule 1171) (VOC)	11-27	1999	2002
2.	CTS-07(P3): Further Emission Reductions from Architectural Coatings and Cleanup Solvents (Rule 1113) (VOC)	9.8	2003	2006-2008
3.	CTS-08: Further Emission Reductions from Industrial Coating and Solvent Operations (VOC)	2-3 3-4	Phase I: 2002 Phase II: 2003	2004-2008 2005-2008
4.	PRC-06: Further Emission Reductions from Industrial Processes (VOC)	3-4	2001	2004-2007
SUBTOTAL		28.8 - 47.8		
Group II. New Control Measures				
1.	CTS-09: Further Emission Reductions from Large Solvent and Coating Sources (VOC)	4-6 3-5	Phase I: 2000 Phase II: 2002	2003-2004 2005-2006
2.	FUG-05: Further Emission Reductions from Large Fugitive VOC Sources (VOC)	1-2 1-2 1-2	Phase I: 2001 Phase II: 2002 Phase III: 2003	2003-2006 2004-2007 2005-2008
3.	FUG-06: Emission Reductions from Hydrogen Plant Process Vents (VOC)	0.8	2000	2001
4.	RFL-02(P2): Further Emission Reductions from Gasoline Dispensing Facilities (Rule 461) (VOC)	2-5	2000	2001-2002
SUBTOTAL		12 - 22		
TOTAL		40.8 - 69.8		

¹ The emission reduction estimates were based on the 2010 planning inventory in the 1997 AQMP. The actual reductions are subject to change during the rulemaking based on the latest available emission inventory data. Emission reductions from FUG-06 are not included in the overall reductions because these emissions may not have been included in the 1997 AQMP baseline emissions inventory.

² Longer implementation period than indicated may be required in order to reach reductions toward the upper end of the range.

KEY ISSUES

There are a number of policy and technical issues associated with the preparation of this Amendment. AQMD staff is requesting comment on these issues, which are further defined below. In addition, staff invites suggestions on any other issues to be considered as part of the Amendment.

Technology-Forcing Standards

In order to achieve attainment of the federal ambient air quality standards, technological advancements and the use of such technologies are required. This necessitates the prescription of emissions standards based on future technological advancement. While successful in the past, there is no guarantee that technology advancement will progress as forecast by staff. This requires that AQMD have the ability to adjust the applicable limits and amend the SIP to reflect the adjustments. This situation can put companies that comply with the adjusted limits at risk of federal enforcement and citizens' suits until U.S. EPA approves amendment to the SIP. This raises the issue of timing of submittal of adopted rule limits until after further assurance of control availability occurs. As such, these limits will continue to remain as part of the AQMP control measure emissions reduction commitment.

Control of Federal Sources

Attainment of the federal ambient standards requires that all sources contribute their fair share in reducing emissions. This includes sources that are exclusively regulated by the federal government, including but not limited to ships, locomotives, and aircraft. To date, emissions from such sources have not been reduced to the same degree as those from stationary and other mobile sources. Regulation of such sources requires federal action. Thus far, U.S. EPA has stated that the federal Clean Air Act does not provide authority for local air quality districts to make an 'assignment' regarding federal source emission reductions to U.S. EPA, even where it recognizes such reductions are necessary. Nonetheless, U.S. EPA has made progress in controlling pollution from such sources.

Worthiness of Measures Achieving Less Than 0.3 Ton of Emission Reductions

Over the past two decades, stationary source emission reduction programs have reduced most source categories in excess of 80%. As a result, the remaining emissions in many categories are small. What further emissions reductions that have been identified by AQMD staff as technologically achievable result in some cases in reductions less than 0.3 ton per day. It is at this level, given the uncertainty in the emissions inventory and the availability of limited staff resources, that the issue arises whether it is appropriate to incorporate these measures or to invest resources toward alternative approaches that may result in greater emission reductions in other source categories. Regardless, AQMD staff will continue to eval u-

ate approaches to reduce emissions from all sources and prioritize their availability and effectiveness in achieving both federal and state ozone air quality standards.

Feasibility/Schedule of Measures As Proposed by Staff

Finally, staff requests comment on the feasibility and schedule of measures as proposed in Tables 1 and 2, and invites suggestions on other measures to consider in the Amendment.

OUTLINE OF AMENDMENT ADOPTION PROCESS

This Overview serves to initiate the Amendment development process. At this opening stage of the process, a series of public consultation meetings will be scheduled to solicit comment on the concept of a 1999 Amendment to the 1997 Ozone SIP Revision and on the preliminary proposal for a revised control strategy. The following describes how the public can become involved in the Amendment development effort.

Public Meetings

When the draft Amendment is complete, it will be formally released for public comment. Public workshops will be held throughout the four counties of the South Coast Air Quality Management District to solicit comments. At the conclusion of those workshops, AQMD's Governing Board, consisting of 12 elected and appointed officials, will conduct a public hearing prior to taking final action on the Amendment. Testimony presented is weighed heavily by Board Members in determining whether or not to adopt a plan or plan element.

WORKSHOP SCHEDULE

Tuesday, October 12, 1999 7 p.m. Carson Community Center Room 107 801 E. Carson St. Carson, CA	Wednesday, October 13, 1999 10 a.m. City of Anaheim Council Chambers 200 S. Anaheim Blvd. Anaheim, CA	
Thursday, October 14, 1999 10 a.m. Holiday Inn Express Empire B Room 3400 Market St. Riverside, CA	Thursday, October 14, 1999 2 p.m. County of San Bernardino Board of Supervisors Chambers 385 N. Arrowhead Ave. San Bernardino, CA	Thursday, October 14, 1999 7 p.m. South Coast AQMD Auditorium 21865 Copley Drive Diamond Bar, CA

Comment Letters

During the public review process, written comments on the proposed 1999 Amendment to the 1997 Ozone SIP Revision are encouraged. Comments or a request to be placed on the mailing list for future notices of meetings and availability of documents should be sent to:

"1999 Amendment"

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